

Technical Branch
Inspection Group
Mechanical Series

MECHANICAL INSPECTOR

02/00 (REB)

Summary

Under general supervision, conduct field inspections of construction projects to enforce compliance with municipal, state and national mechanical codes and regulations, and adherence to City approved plans, specifications and standards.

Typical Duties

Examine new or existing environmental control systems of residential, commercial or industrial buildings or facilities, including those having fire, flood or other major damage, prior to, during various phases and at completion of installation, repair or modification to ensure that trades work and materials conform to prescribed quality and safety standards. Involves: scheduling inspections, and investigating or referring complaints to supervisor as instructed; verifying that contractors are licensed and possess required permits, issuing them as authorized if necessary; reviewing design drawings and specifications for acceptability of lay-outs, materials and equipment to be used; visually checking that heating, ventilation, air conditioning and refrigeration project components including, but not limited to, sheet metal ducts, vents, pipes, tubing, power source connections, wiring harnesses, furnaces, refrigerant containers, gas heating appliances, coolers, cores, fans, motors, control units, vacuum pumps, air compressors, condensers, air or water filters, gauges, switches, mounting brackets, hangers, fittings, fastenings, welds, brazing, lubrication, and insulation adequately meet legally mandated technical requirements; observing functioning of installed equipment or systems for indicators of faulty or unsafe operation such as carbon, pitch or grease deposits, noise, or heat; measuring reference points for placement of components, ductwork dimensions and maintenance accessibility, and calculating factors such as gas or fluid flow, level, pressure and temperature requirements and limits using established formulas and comparing results to standards references; monitoring on-site conditions and work in progress for suitability of construction trades practices; conferring or corresponding with property owners or contractors and their trades workers to notify them of procedural, materials or equipment code violations or deviations from approved plans as well as informing them of allied property maintenance, grading, zoning or hazards noncompliance, to interpret and explain current and revised building codes or department rules and regulations, and to suggest corrective measures and time limits; taking remedial actions, preparing and issuing citations and work stoppages, and reporting on uncorrected violations for use by administrative or judicial authorities; obtaining evidence of failure to comply such as by sketching location and features of deviations, collecting samples of unapproved materials for laboratory testing and searching inspection records, and testifying in court.

Perform related incidental duties contributing to the realization of unit or team objectives as required. Includes: maintaining awareness of changes in electrical trades technology and codes; substituting for supervisor or coworkers as qualified and within authorized limits by carrying out specified functions to maintain continuity of ordinary operations, if delegated; providing designated support for projects or activities overseen by higher graded non-supervisory personnel as instructed; explaining and demonstrating work performed to assist supervisor in orienting and training less knowledgeable employees; engaging in assignments pertaining to functions of other positions for training purposes under close supervision; logging activities, and preparing and submitting recurring or special status reports; keeping tools, equipment and work area orderly, safe and clean.

Minimum Qualifications

Training and Experience: Graduation from high school or General Education Development (GED) equivalent and completion of Journeyman Mechanical Training, plus two (2) years journey level experience in various phases of general heating, refrigeration, air conditioning and ventilation systems installation or modification; or an equivalent combination of training and experience.

Knowledge, Abilities and Skills: Good knowledge of: mechanical and environmental control systems principles; mechanical codes and related regulations; methods, materials and techniques of the mechanical trade; defects and hazards in heating, refrigeration, air conditioning and ventilation installation and equipment.

Ability to: read and analyze mechanical trades technical procedures or governmental regulations, and interpret various instructions in written, oral, diagram, or schedule form; solve practical problems that deal with an assortment of concrete variables in situations where only limited standardization exists to detect defects or hazards related to mechanical systems installation or equipment, or trades work deviations from approved construction plans, and their causes; apply mathematical concepts such as fundamentals of plane and solid geometry and trigonometry together with fractions, percentages, ratios, and proportions to practical situations;

express oneself clearly and concisely, both orally and in writing to firmly, tactfully and objectively interpret and enforce building code requirements, and prepare inspection reports or business correspondence and maintain related records; establish and maintain effective working relationships with fellow employees, contractors, property owners, officials and the general public.

Skill in safe operation and care of: measuring instruments and tools common to mechanical trades inspection; motor vehicle.

Physical Effort and Work Environment: Frequent: moving over uneven construction site terrain which includes climbing stairs and ladders; exposure to varying weather conditions. Occasional: driving through city traffic.

Licenses and Certificates: International Congress of Building Officials or the Southern Building Code Congress International Mechanical Inspector (Level 1) certification within six (6) months of date of appointment; Texas Class "C" Driver's License or equivalent from another state.

Director of Personnel

Department Head

OFFICIAL